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ELECTRIFIED CLOTHING FOR AIRMEN FLYING IN COLD WEATHER: R.F.C. OFFICERS OF A NIGHT BOMBING-SQUADRON
FIXING CONNECTIONS TO THEIR ELECTRIC FOOT-SOLE AND GLOVE HEATING-APPARATUS.

Earlier in the winter, after a German raid in exceptionally cold weather, stories went the round of the daily Press to the effect that the enemy airmen were enabled to stand the severest cold because the clothing supplied to them was electrically heated throughout by

means of appliances of which the Germans alone had the secret. As a fact, for a long time past all the Allied airmen when flying in cold weather have been so equipped—if, indeed, we were not the very first to invent and use electrically warmed garments.

OFFICIAL PHOTOGRAPH.

THE NAVY AND NATURE: CAMOUFLAGE, AND SMOKE-CLOUDS. ♦ By ARCHIBALD HURD.

SEAMEN live close to Nature, and they are never above learning from her, as the past years of warfare have proved. When the story comes to be written of the disguises, ruses, and manœuvres adopted in order to deceive the enemy, the public will learn all about the mysterious V.C.'s, D.S.O.'s, and other decorations.

The connection between the cuttlefish and the destroyer may seem remote, but it exists. The cuttle-fish, when attacked, starts back and begins to retreat rapidly, blowing water from its mouth-cavity through the funnel with which it is provided, and simultaneously expelling a dark liquid from its ink-sac. Sailors have applied that method of baffling a foe to naval warfare. Those who are not in close touch with naval affairs were first reminded of this development by a passage in Lord Jellicoe's despatch describing the Battle of Jutland. The British Battle Fleet had formed its junction with Sir David Beatty's battle-cruisers, and then "the enemy constantly turned away and opened range under cover of destroyer attacks and smoke-screens, as the effect of the British fire was felt." What the Germans do, British seamen do as circumstances may dictate—though it is not their way to run away.

The smoke-screen has also proved very serviceable in protecting British merchant-ships from attack by submarine; and the Americans have adopted, at the suggestion of British seamen, the same means of evading the pirates. Merchant-ships now have on deck what look like small boilers mounted on

short legs. They are, in fact, contrivances for creating masses of smoke very rapidly. That is no secret, as the Germans have long since found out how it is being done. When the U-boat is seen by a ship, the smoke-maker is set to work—a very simple process—and in a few seconds a screen is created, behind which the master hides his vessel as he alters course in order to escape. There is another way of making a smoke-screen—that consists in throwing overboard what are known as smoke-boxes.

It was thought at one time that, as ships can be made unsinkable—which is another story—so they could be made invisible by applying to them the defensive methods of animals. There exists quite a literature dealing with this subject of protective colouring. But what is the defence of the weaker animals is an aid to the offensive of the stronger and predatory animals, which, by adopting inconspicuous colours, are able to approach their quarry unobserved. For instance, in cold climates the ptarmigan and hare are very difficult to see in summer against heather and rock, but in winter they are as white as snow. They are thus difficult to see. But the fox and their other foes also change their covering with the season, and can be recognised only with difficulty. Nature adjusts the advantages and disadvantages of protective colouring so nicely as between weak and strong animals that the latter are able to secure the food they require; while the former are preserved from extinction.

When the Germans inaugurated their sink-at-sight

policy, it was suggested that it might be possible to paint ships so as to render them invisible. The matter was put to the test and many experiments were tried, but without success. The Admiralty have now announced that "the theory of rendering ships invisible at sea by painting them various colours is no longer tenable." In particular, attempts were made to apply the law of the American artist Abbot Henderson Thayer, who discovered that animals are painted darkest on those parts which tend to be best lighted by the sky's light, and vice versa. In short, Nature eliminates shadows, and thus reduces the visibility of birds and animals. At first sight, it may appear disappointing that the Admiralty's experiments failed. But if they had succeeded, what would have been the effect on the efficiency of our blockade? The Germans would have applied the same principles, with the result that merchant-ships, if not men-of-war, would have evaded the Grand Fleet and its outer patrols, and the constriction now pressing upon Germany would have been relieved.

Defeated in one direction, the Admiralty have for months past been working in others. A system of camouflage has been developed with excellent results. More than that cannot be said. Every week between 4000 and 5000 "targets" are exposed to enemy attack, and, owing to camouflage, smoke-screens, and the patrols, only a small proportion of those "targets" is hit, and we are still living in this country more comfortably than the Germans lived two years ago.

THE SONGS OUR SOLDIERS SING. ♦

ONE of our Generals has told me that there is not so much singing of route songs as there used to be when troops were being moved up into the forward sections of the fighting zone. But he insisted that this change did not mean that the fine edge of moral had been blunted. The men are as good as ever they were—better, perhaps, now that even the conscripted recruits are becoming wary veterans and the iron determination of the whole great brotherhood is tempered to steel. But it was the "Tommy" of the Old Army—who is now no more—and the Reservists who were so fond of singing and whistling when on the road or in billets as to surprise even the gay, gallant *Poilus* who have inherited such a store of quaint marching chanties—many of them closely resembling the counting-out rhymes used in children's games. The Territorials who had had camp holidays were also a tuneful race.

But the multitudes that arrived later on, taken out of industrial occupations which were always being speeded up, had been worked too hard all their lives to acquire the habit of open-air singing. The modern factory or warehouse or shop has no use for chanties; the wheels of our vast industrial mechanism have not ground out a single joyous folk-song. The successors of the Territorials only knew the choruses of a few popular musical songs; and their junior officers—the majority men accustomed to the silent, engrossing toil and moil of business life—could teach them nothing better, as a rule. Such officers and men look on war as a business rather than as a sport—the game of games—and there can be no doubt that their

point of view makes for a higher degree of efficiency in the end. The picturesque side of warfare has vanished for ever; the late Ivor Campbell (that new Stevenson in becoming who fell on the road to Kut, after serving in France with his fellow-clansmen) spoke salutary truth when he defined modern war as "organised boredom," and said he felt its incessant drudgery in his very bones. So the men of the New Armies will march songless for hours and miles—just as they walked aforesome to the dog-day's work through the dim, echoing streets of still-slumbering industrial cities. Considered aright, their grim silence is that of some tremendous machine which is running smoothly and achieving its purpose without any fuss at all.

Singing, however, breeds cheerfulness; and it would be well if the men of the New Armies could be provided with a suitable song-book. The book which would be most useful to them would contain, in the first place, the words of the old familiar tunes that have survived so many of the wildly popular music-hall ditties. The British working-man turned soldier is curiously conscientious in this matter, and quite unlike the concert-singers, who think more of tune and tone than of the human significance of a song. He will not open his mouth if he has not the words by heart. If he come from Scotland or Wales, he almost always knows the words time has wedged to his inherited melodies. That is why Scottish and Welsh regiments are so much better able to sing their songs to a finish than English soldiers. With the

By E. B. OSBORN.

latter, the first verse of "Annie Laurie" (the greatest favourite of all), or "Swanee River," or "Clementine" (revived in compliment to American comrades), is apt to go well enough; but is almost sure to be followed by a gradual dwindling of sound, until at the end, perhaps, no more than half-a-dozen are really singing, the others being reduced to absolute silence or a hesitating bumbling as of a bluebottle in a window-pane. The song-book required should therefore contain, to begin with, the words of twenty or thirty favourite old songs—it would be easy enough to make a suitable list. Then would follow a few of the good music-hall songs (words only) which have survived their vogue on the barrel-organs. "Tipperary" would have to be included, though it was never so much sung in the Army as most people—among them our French and American friends, and enemy musical critics in Germany—have been taught to believe. "Daisy" and "The Honeysuckle and the Bee" (the latter a pretty tune, with a touch of the folk-song spirit), and others that are still well remembered, ought not to be left out. Next would come a small selection of the beautiful folk-songs collected by Mr. Cecil Sharp and others. Last would be included a liberal selection of the parodies, marching songs, and "ragging" ditties which have been collected in Lieutenant F. T. Nettleingham's "Tommy's Tunes"—the most precious of all war anthologies. If the War Office had a little more imaginative insight the soldiers' song-book I have in mind would already be a part of every soldier's equipment.

THE HONEY BEE, "SUGAR" SUPPLIER. ♦

THE shortage of sugar will not have been an unmixed evil if it be found, when the war is over, that it turned the attention of the general public to the advantages of bee-keeping. At the present moment, the harassed housewife is only too pleased to pay, if her means permit, a fantastic price for imported honey. The cost to the consumer has trebled since war began, and the immense stocks that had come to this country from California, Cuba, Jamaica, the Hawaiian Islands, and elsewhere, are now seriously depleted. California is unlikely to export honey, and the other far regions of the earth can only send produce to run the gauntlet of submarines over a very wide expanse of waters.

There is no reason why this country should not be self-supporting as far as honey is concerned, for at present we have not nearly enough bees in England to tithe the nectar harvest of our summer flowers. The terrible Isle of Wight disease has ravaged the country in the past few years, and has made us more than ever dependent upon imported honey; but there are signs that the disease has worn itself out, and that though it may have gone far towards exterminating the old black English bee, the cross-bred Italian and Dutch varieties may now be trusted, under favourable conditions, to withstand further attacks. Nothing is more reliable than personal experience, and this is the excuse for quoting one here. My apiary of twenty-two colonies was destroyed by the I.O.W. disease in three years, ending in 1915. In the summer of 1916 a stray swarm was captured

in the orchard and housed, first in a skep, and then in a new hive. In 1917 the single colony threw two strong swarms, which were carefully hived. From the three colonies, the parent and the two swarms, eighty pounds of honey were taken, and sufficient stores were left for the winter. To make the position quite secure, about twenty pounds of run honey has been fed to the bees during the present winter.

Bee-keeping is a very simple science. There are half-a-dozen simple text-books; there is a Bee Association in nearly every county, with an attendant expert. Bees require a well-made hive and a sheltered position; and given as much as that, they will cost nothing to keep, and will yield a surplus varying, according to season and the nature of the surrounding country, between forty and eighty pounds of honey per annum. Each hive will throw a swarm, and if this be taken carefully and stimulated with a little food, it will make enough honey for its own winter keep, and will come into profit in the following year.

It is possible, even at present prices, to start a fully equipped hive for an outlay of £5. The May or June swarm that is to be expected will be worth at least £1, even if sold locally, and the year's honey ought to be worth, on a moderate estimate, £3; so that within eighteen months the hive, still productive, will have cost nothing. On the other hand, if the swarm be hived and kept, there will be two colonies ready for the spring of 1919, and they will increase to four during the summer.

By S. L. BENSUSAN.

Of all the small industries within the reach of the owner or tenant of garden, orchard, or paddock, nothing is more profitable than bee-keeping; and if the public has preferred to eat imported honey, there can be only two reasons. The first is to be found in the low cost of foreign honey in normal times; the second, in the bees' unfortunate offensive equipment. War, while trebling the price of imported honey, may be said to have sharpened the sting of the worker bee; for it cannot be denied that the half-bred Ligurian, Carniolan, or Sicilian is far more restive than the old black English variety. At the same time, the fear of stings is apt to be exaggerated. The bee-veil, properly adjusted, is a sure guard for the face and neck; while for those who do not care to have their hands stung, bee gloves, with gauntlet attachments, can be purchased; and gradually most people learn to examine the hive without protection, though it is well to leave them alone in thundery weather, and to choose the middle morning on the hottest days, for then the majority of the bees are afield.

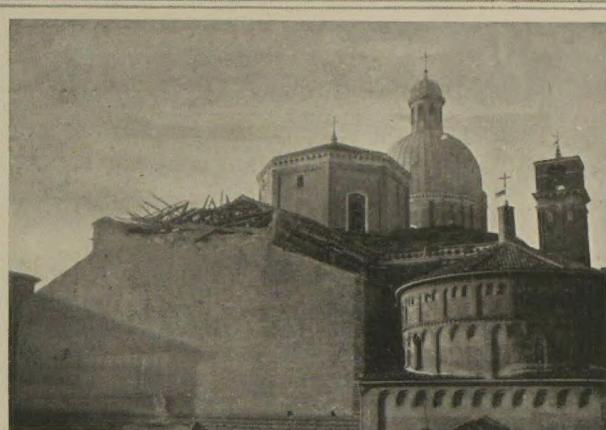
Few people realise that if bee-keeping were developed to the full extent of its possibilities, and no new or old epidemics came to ravage the apiaries, we could dispense with many thousands of tons of sugar, and be unconscious of shortage. Honey has countless uses in the kitchen, and as a form of sugar it can be taken by many to whom the ordinary product of cane or beet is forbidden for reasons of health.

AUSTRIA'S ATTACK ON ITALIAN ARCHITECTURE: RAID EFFECTS IN PADUA.

ITALIAN OFFICIAL PHOTOGRAPHS.



AS IT WAS BEFORE THE AUSTRIAN AIR-RAIDS: THE CATHEDRAL OF PADUA.



AFTER AN AUSTRIAN AIR-RAID: THE ROOF OF THE CATHEDRAL DAMAGED BY A BOMB.



WAR ON WOMEN AND CHILDREN: A WOMAN OF PADUA BESIDE HER HOME WRECKED BY AUSTRIAN BOMBS.



A POPULOUS QUARTER BOMBED BY AUSTRIAN AIRMEN: IN THE HEART OF PADUA.



SCENE—A STREET IN PADUA: A GROUND-FLOOR BLOWN OUT BY AN AUSTRIAN BOMB.



PHOTOGRAPHED DURING THE FIRE CAUSED BY AN AUSTRIAN BOMB: THE CUPOLA OF THE CARMINE CHURCH AT PADUA.



AFTER ONE OF THE FOUR AUSTRIAN AIR-RAIDS ON PADUA: THE INTERIOR OF THE VERDI THEATRE.

An Italian communiqué of December 31 said: "The enemy becomes more bitter in the bombardment of open cities. Last night his airmen returned for the third time over Padua. . . . The rich artistic patrimony of the city suffered severely. The façade of the Cathedral was blown down." Another semi-official Italian statement said: "The enemy shows more clearly every day his desire to offend in Padua the most sacred

memories and the most precious treasures of religious art for which the city is famous in all the Catholic world." Describing the fire caused in the main dome of the Carmine Church, Mr. H. Warner Allen writes: "A low moan went up from the watching crowd as the cross itself collapsed into the fiery brasier. Through the flames the inner roof of domed stone, blackened with smoke, held inexorably against the heat."

TANKS ON CAMPAIGN: AT A "TANKDROME"; AND

OFFICIAL

ON THE BATTLEFIELD, AT AND SINCE CAMBRAI.

PHOTOGRAPHS.



IN THE GERMAN SECOND LINE BEFORE CAMBRAI, NOW IN BRITISH OCCUPATION: A TANK STOPPED IN NEGOTIATING A DEEP PLACE, UNTIL AFTER THE ACTION.



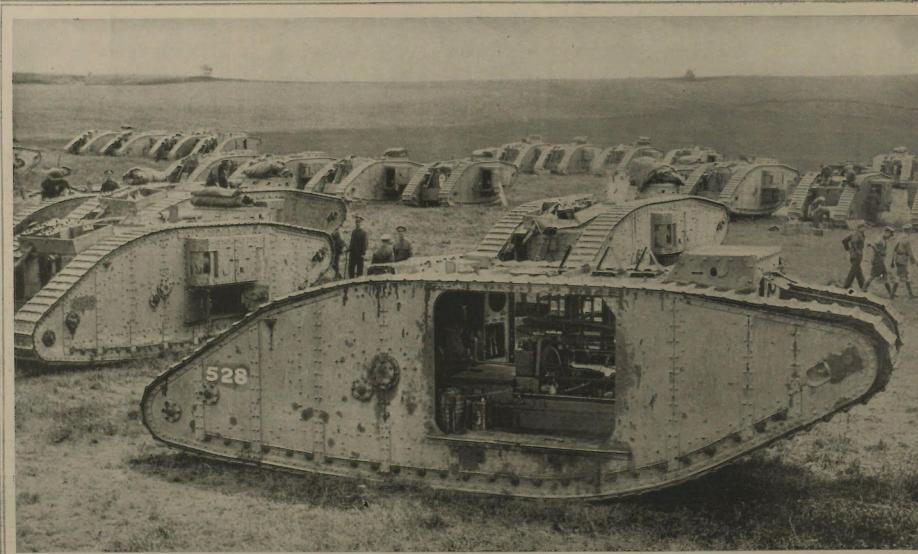
CRASHING THEIR WAY RESISTLESSLY FORWARD: TREES AND UNDERWOOD TWO TANKS



THROUGH AND OVER THE SAPLINGS AND SMALLER TOLIDLY FORGING THEIR WAY AHEAD.



BREASTING A GERMAN BARBED-WIRE ENTANGLEMENT AND CRUMPLING UP THE WIRE AND STAKES AS IT PLOUGHS THROUGH: A TANK TACKLING AN EXTRA STIFF JOB.



LOOKING AT FIRST SIGHT LIKE A GROUP OF ANTEDILUVIAN MONSTERS SQUATTING IN THE OPEN BEFORE STARTING ON THEIR PROWL: AT A "TANKDROME" ON THE CAMBRAI FRONT.



IN ACTION—A TANK NEGOTIATING A WIDE GERMAN GUN-PIT WITHOUT HALTING IN ITS ADVANCE: DOWN—UP—OVER—THEN ON AGAIN.

"Tank service on campaign" might serve as a general description for the exceptionally interesting and instructive set of Tank pictures shown here. Taking the fourth illustration of a "Tankdrome" first, we see Tank camps, or "lines," the muster-place, before the Tanks move out for action, with the Tanks formed up in rows; also, as they are ranged between-whiles after returning from action, to "stand by" until next ordered forward. Anglo-Indians who remember the Elephant batteries of the "Hyderabad Contingent" of the days before Lord Kitchener's Indian Army reorganisation, may recall something of what the elephant lines looked like on occasion. The first illustration (and, to some extent, the fourth also) shows the

almost perpendicular steepness of some of the places the Tanks crossed in passing over German trenches in the Cambrai battle. In the case of the first illustration the acclivity proved temporarily too much for the Tank seen; but, as the trench was captured, the Tank's salvage and return to duty was assured. The way Tanks can crash through a wood forcing a path among the trees, and through the undergrowth, like primeval mastodons in chase, is shown in the second illustration. One can understand, also, from the third illustration, the descriptive accounts by war-correspondents at the Cambrai battle of how the Tanks ploughed up, tore gaps through, and flattened out the most formidable German barbed-wire entanglements.

WAR IN THE AIR: BRITISH BOMBING-MACHINES, AND A SCOUT.

OFFICIAL PHOTOGRAPHS.



LINED UP AT AN AERODROME ON THE BRITISH WESTERN FRONT: A SQUADRON OF BOMBING-AEROPLANES OF THE ROYAL FLYING CORPS.



PREPARING FOR A NOCTURNAL EXPEDITION: A BRITISH SCOUT AEROPLANE BEING GOT READY FOR A FLIGHT—
A MOONLIGHT EFFECT.

British airmen are constantly carrying out bombing raids over the German lines on the Western Front, with results that far outweigh in military importance the enemy's futile attacks upon the civilian population. As a typical example of a day's work by the Royal Flying Corps at the Front, take the following report from Sir Douglas Haig, published on February 5. "On Sunday," he writes, "the weather was fine, but with considerable ground mist. Reconnaissances were carried out by our aeroplanes, and many hostile batteries were engaged by our artillery, with observation from the air.

Nearly 4½ tons of bombs were dropped during the day on various targets, including the railway signals at Melle, Ingelmunster, and Lichtervelde. At night no operations were possible owing to the mist. In air-fighting five hostile machines were brought down and five driven down out of control. One of our aeroplanes is missing." In the first three days of February, British airmen destroyed 10 German aeroplanes and drove down 10 out of control, losing only two machines themselves. Between January 29 and February 3 our airmen and gunners disposed of 49 German machines (25 destroyed), with a loss of 8.

WAR IN THE AIR: MEN WHO REPAY GERMAN RAIDS WITH INTEREST.

OFFICIAL PHOTOGRAPH.



A BOMBING SQUADRON OF THE ROYAL FLYING CORPS ON THE BRITISH WESTERN FRONT:
A PILOT EXAMINING A 25-LB. BOMB.

On the opposite page is described a typical day's work by the R.F.C. on the Western Front on February 3. To this may be added the official account of the previous day's air operations. "On the 2nd inst," writes Sir Douglas Haig, "several successful reconnaissances were carried out by our aeroplanes, and many hostile batteries were effectively engaged by our artillery with observation from the air. Nearly four tons of bombs were dropped by us during the day on various targets, including the railway station and sidings at Valenciennes. Several thousand rounds were fired at parties of the enemy in their

trenches and in back-areas. Five hostile machines were brought down in air-fighting, and five others were driven down out of control. One of our aeroplanes is missing. On the night of the 2nd-3rd inst, the enemy's aerodromes and billets were bombed by our machines." The total number of enemy machines accounted for by the R.F.C. and the R.N.A.S. on the Western Front in January was 144, of which 86 were destroyed by our pilots, 4 by anti-aircraft guns and rifle fire, 53 driven down out of control, and 1 captured intact. Of our machines, 39 failed to return.



By G. K. CHESTERTON.

THERE is at times a temptation to wish, now that we ration food, to ration the talk about food. When it is apparent, in the round of social intercourse, that the time has come to talk of many things, it seems a pity to dwell exclusively on the topic of cabbages, to the exclusion of such attractive and allied topics as kings, shoes, ships, and sealing-wax. Falstaff, when dying, babbled of green fields; but he did not, when living, babble exclusively of greens—even in the somewhat literal sense that would include green cheese and green Chartreuse. Falstaff would not have objected to talking about food—far from it—and in this at least I am at one with him. But he was at least an English glutton and not a German glutton; and the difference is that he did not take food seriously. Unfortunately, under our abnormal conditions, those who talk about it are bound in a sense to take it seriously; and, while it is a good broad joke, it is a rather narrow serious topic. If I have to read reverently for instruction and culture, I would rather be left on a desert island with an encyclopaedia than with a cookery-book—especially if there were nothing to cook on the island. And one would suppose, to hear some people talk, that this was rapidly becoming the case with our own island.

I would offer a mild warning against too much of such talk, on somewhat more serious grounds. I will not insist with severity on my suggestion for the rationing of remarks on food. I do not propose that a bell should ring, or somebody call out "Time!" as they do when the taverns close—at which precise instant everybody must drop the subject, even at the price of dividing the word "ham" from the word "sandwich," or saying "mutton" without being allowed to say "chop." I do not desire our table manners to consist wholly of pointing, still less of snatching. I do not suggest that a man should receive a sugar-card permitting him to talk, in moderation, about sugar; or a soup-ticket authorising him twice a week to mention soup.

My remonstrance, so far as it goes, is more serious—and, indeed, refers rather to the tone than the topic. I deprecate a certain vocal atmosphere that has arisen in my own middle-class, and which seems to suggest that the food problem is not only a muddle (if it is), but the chief moral problem of the hour. I say advisedly in my own class, for the problem of the poor is quite other and much older. Their tragedy has not been made—but rather, if anything, masked by the war. And the social distinction concerns another very practical point, which alone makes this sort of conversational pessimism a hurt to patriotism, and sometimes a help to pacifism. I mean the fact that the class I speak of is not only the class that reads the newspapers, but generally the class that writes the newspapers. Their private life becomes in a sense public life; it is what is said in their inner chambers that is proclaimed on the housetops—and it is what is proclaimed on the housetops that is heard by the enemy in the gate.

When I made a somewhat similar protest against the panic-mongering about air-raids, these were one curious point in the situation. I think the most annoying part of it was that there was so much more

panic-mongering than there was panic. Most of the men and women I met were admirably stoical, or still more admirably flippant. They talked about the incident as if they had just missed a train, until they read in the newspapers that they were fleeing from an earthquake. Many almost treated it as if it were a shower of rain, until those wiser than they explained to them that they were feeling it as a reign of terror. My impression was that English hearts were pretty much in the right place, which is not (either by philosophy or physiology) in the mouth or in the boots; and that English heads were at least much saner than English head-lines. And, somewhat in the same fashion, I find in the food problem also that there is not so much needless fear as needless fuss. At the worst, it is something worse than the mere grumbling of discontented people; it is rather the grumbling of contented people. At the best, it is too often the grumbling of people who ought at least to be comparatively contented. When I say "comparatively," of course I mean partly by comparison with their

much respect as it is decent for a man to feel for something which he has discovered to be not too difficult for him to do—a discovery which, in a well-regulated mind, will always prevent any positively prostrate adoration. But I know that my fellow-journalists will agree with me when I say that they are in a peculiar position towards life—in the fact that they are forbidden to be so careless as are happier men about what happens in the world. Poetry, it has been said, is a criticism of life; but it is not a criticism that need be offered in large quantities at short and regular intervals. No poet is expected to write an ode to the skylark every morning, even on the improbable supposition that every morning he is up with the lark. No spiritual child of Shakespeare and Wordsworth is expected to unlock his heart with the key of the sonnet every night when he unlocks his house with the latchkey. But journalism is journalistic, often in the literal sense of being daily; and it is a criticism of life that must be always criticising. It is no matter for wonder if it sometimes criticises too much, or if (which is the much more real complaint) it criticises the wrong things. In a sense, the journalist aims at giving pointed and picturesque expression to the attitude of the average man; but there is one very important part of that attitude which journalism is by its nature forbidden to express. And that is his healthy, and indeed heroic, indifference. The journalist cannot treat things as the average man treats a vast number of them—with what is, properly considered, one of his worthiest and most philosophic gestures. He cannot pass them by.



PROBABLY FOR THE USE OF "RUNNERS": A NEW GERMAN GAS-MASK, WITHOUT EYE-PROTECTION.

The gas-mask shown in the first photograph was probably designed for the use of "runners," who have to pass along the trenches quickly. A full gas-mask with "goggles" would impede progress. It consists only—as the photograph shows—of respirator, mouth-piece, and nose-clip. The other gas-mask is of particular interest as showing that the enemy, being short of rubber, have had to use leather for the flexible parts.

Canadian War Records.

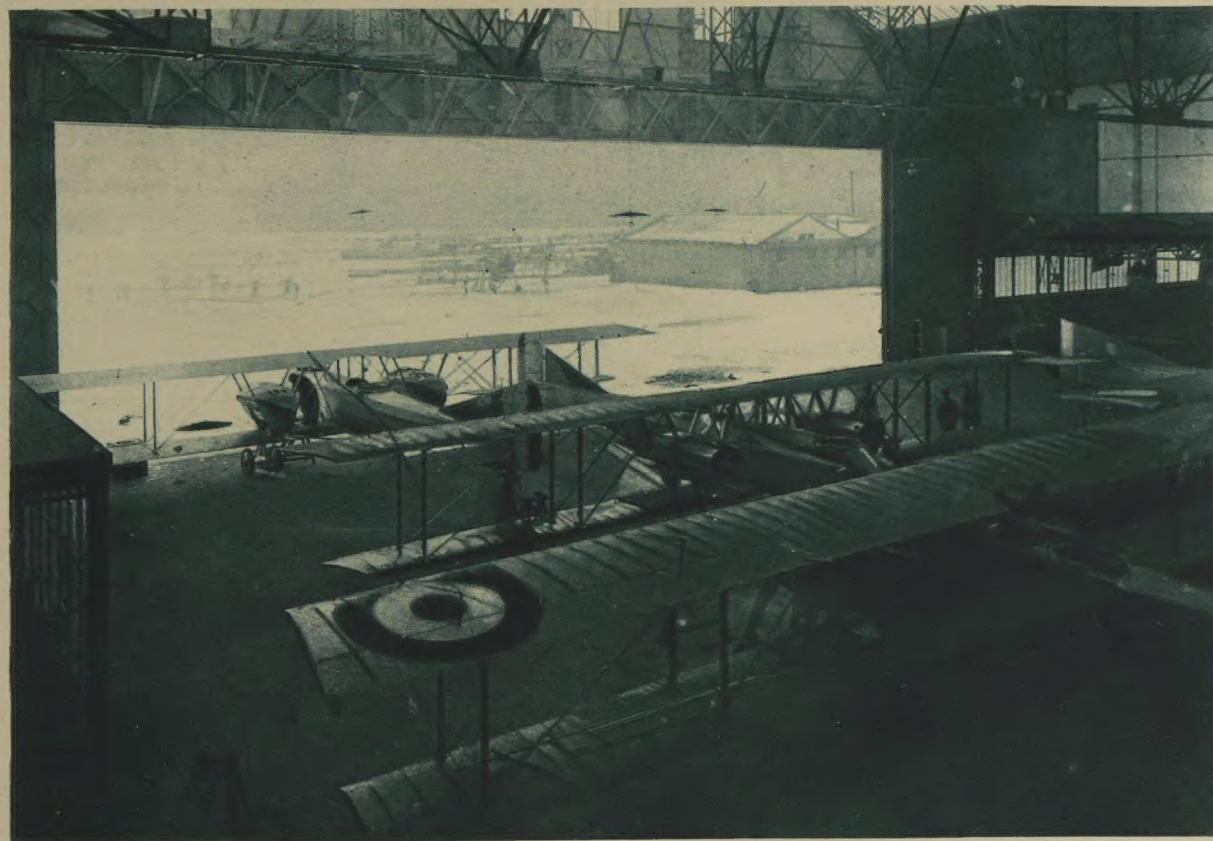
WITH LEATHER IN PLACE OF RUBBER: A NEW GERMAN GAS-MASK, CAPTURED AT LENS.

neighbours, and still more by comparison with their enemies. But, indeed, in the latter case, there is simply no comparison. Food, especially foreign food, is to England as compared to Germany what light and air are to a man caught in a net compared to a man locked up in a box. It is very annoying to be caught in a net; but if the net is loose it cannot be the annoyance known as being strangled, and the sea-net thrown about England is obviously very loose indeed. More light and air gets through the net than not; more, very much more, of our daily habits of eating and drinking remain as they were than have been really altered or abolished. A few days of any of the real sieges of history would make us all feel as if we had been complaining of the scarcity of humming-birds in Tokay—as some of us are, for all I know. But Germany is really subject to a siege—not like one of the local sieges of history, but, so far as it goes, really fixed and absolute. By all conceivable common-sense, we cannot be suffering so much as the Germans; and I cannot see upon what patriotic or even politic principle we should go out of our way to tell them that we are. The real explanation, I fancy, is also the same as in the case of the air-raids. It is not so much the hunger for food as the hunger for news. I hope I shall always speak of the journalistic trade with as

tern of practical housekeeping, it is generally his own housekeeping that he most practically assists. But he is fully justified, as a journalist, in putting the thing down because it is interesting, quite apart from whether it is useful. And that simple word is, of course, the explanation of anything puzzling in the contrast between the excitement of the English Press and the comparative coolness of the English public. A roaring mass of flame and poison falling from a flying ship into a back garden in the suburbs is certainly interesting, if not alarming. Our meals are to us most certainly a matter of interest, even when they are not a matter of anxiety. But I think it well that it should be made clear to our Allies, and still more to our enemies, that our population is not in a frenzy about famine because the papers largely consist of warnings and calculations—any more than our population consists exclusively of criminals because the police news consists mostly of crimes. In short, our foe ought fully to realise two facts—first, that we are not even hungry in the more serious sense; and second, that we are ready to be hungry in the most horrible sense, to bear all that was borne by men in the stark reality of real sieges, before we will admit that the greatest problem of history has been solved by piracy on the high seas.

WAR IN THE AIR: WITH THE AIRMEN OF THE FRENCH SERVICE.

FRENCH OFFICIAL PHOTOGRAPHS.



1. AT ISSY-LES-MOULINEAUX AVIATION STATION, NEAR PARIS: THE INTERIOR OF ONE OF THE FLYING-GROUND HANGARS.

The upper illustration shows the interior of one of the larger aeroplane housing-sheds or hangars, at Issy-les-Moulineaux, where some of the leading aeroplane-builders of France have their workshops, and the neighbourhood is the scene of constant flying activities. There is an important aviation station and school with flying ground at Issy-les-Moulineaux, which is on the River Seine, near one of the older forts of the Paris

2. IN A BREGUET MACHINE: THE PILOT'S COCKPIT; WITH GAUGES, RECORDING INSTRUMENTS, AND PLAN OF THE GROUND BELOW.

enceinte, about four and a-half miles from Paris, towards Versailles. Military biplanes and hydroplanes (seaplanes) are built at Issy-les-Moulineaux; and the latter are tested on the river. In the second illustration, taken at an aviation camp on the Marne front, the pilot of a Breguet machine is seen seated in his "cockpit," with gauges and recording instruments at one side, and directly in front of him a chart of the ground.

WAR IN THE AIR: GERMAN RAIDERS "EARTHED" IN BELGIUM AND ESSEX.

PHOTOGRAPHS—BELGIAN OFFICIAL AND L.N.A.



BROUGHT DOWN BY BELGIAN ANTI-AIRCRAFT GUNS ON ITS RETURN FLIGHT AFTER ATTACKING DUNKIRK: A GOTHA BOMBING AEROPLANE.



SHOWING THE ENGINES AND PROPELLERS ON EITHER SIDE OF THE CENTRAL CAR: A NEARER VIEW OF THE SAME MACHINE SEEN IN THE TOP PHOTOGRAPH.



WITH A CAMOUFLAGE DESIGN PAINTED ON ITS PLANES: WRECKAGE OF THE GOTHA BROUGHT DOWN IN ESSEX AFTER A RAID ON LONDON.

The Belgian air service and anti-aircraft batteries have proved themselves very efficient. A Belgian official communiqué of January 21, referring possibly to the subject of our two upper photographs, said: "A German bombing aeroplane returning from Dunkirk was forced to descend on the evening of the 19th near Bulscamp (east of Dunkirk)."

The lower photograph shows the Gotha brought down by Captain G. H. Hackwill, R.F.C., and Lieut. C. C. Banks, R.F.C., during the raid on London on January 28. The official report stated: "After a brief fight at close range, the raider took fire and fell in flames to the ground 10,000 feet below. All three members of its crew were burnt to death."

WAR IN THE AIR: BRITISH FLIERS WHO BOMB THE FOE BY NIGHT.

OFFICIAL PHOTOGRAPHS.



1. PREPARING FOR A NIGHT BOMBING EXPEDITION OVER THE ENEMY'S LINES: PILOT AND OBSERVER GETTING INTO THEIR SPECIAL FLYING-GARMENTS.

The fine weather and moonlit nights which enabled "our German friends," as some call them, to renew their visits to London of late, also inaugurated a spell of extensive nocturnal operations in the air at the Front. Thus Sir Douglas Haig reported in a recent communiqué: "On the night of the 25th-26th inst., our night-flying squadrons were active as soon as it was dark, their activity continuing until about 3 am., when

2. THE MACHINE-GUN ARMAMENT OF A BRITISH FIGHTING PLANE: THE OBSERVER'S ATTITUDE WHEN FIRING ON AN ENEMY BELOW.

a very heavy mist set in and rendered flying impossible. During the fine period of the night over eight tons of bombs were dropped by us, several pilots doing two trips. Five of the enemy's large aerodromes in the neighbourhood of Ghent were bombed, and also billets in the vicinity of Douai. Over 160 bombs were dropped on a new hostile aerodrome west of Tournai." On January 29-30 we attacked hostile billets and communications."

WAR IN THE AIR: THE MACHINE-GUNS OF AEROPLANES

BRITISH AND FRENCH



LINED UP IN THE SNOW: A BRITISH SCOUTING SQUADRON READY TO FLY ON THE WESTERN FRONT.



WITH HIS MACHINE-GUN OVERHEAD: A BRITISH PILOT WHO RECENTLY BROUGHT DOWN A GOTHA.



A FRENCH AEROPLANE AND ITS PILOT: THE RETURN FROM A RECONNAISSANCE FLIGHT.



A GERMAN AEROPLANE'S MACHINE-GUN: AN LVG OF THE LATEST TYPE CAPTURED BY THE FRENCH.



SHOWING THE MACHINE-GUN OVER THE AIRMAN'S HEAD: A FRENCH PILOT AND HIS CHASER-PLANE.



A GERMAN MACHINE: A FOKKER MONOPLANE BROUGHT DOWN BY THE FRENCH, INTACT.

OF VARIOUS TYPES—ALLIED AND ENEMY EXAMPLES.

OFFICIAL PHOTOGRAPHS.



WITH THREE MACHINE-GUNS MOUNTED: A FRENCH CHASER-PLANE AND ITS ARMAMENT.



WITH ONE OF HIS MACHINE-GUNS POINTING UPWARD: A FRENCH PILOT IN POSITION FOR ATTACKING FROM BELOW.



WITH ONE MACHINE-GUN OVERHEAD AND ANOTHER IN FRONT: A FRENCH NIEUPORT CHASER-PLANE.



AT SALONIKA: A CAPTURED GERMAN AEROPLANE ON VIEW AT THE WHITE TOWER.



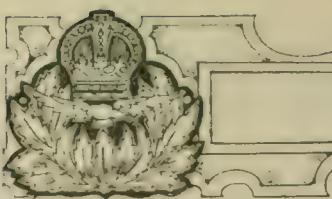
AMMUNITION FOR AN AEROPLANE'S MACHINE-GUN: THE CARTRIDGE-BELT FOR A FRENCH AIRMAN'S CHASER-PLANE.



GERMAN AEROPLANE ARMAMENT—ANOTHER TYPE: THE MACHINE-GUN OF A RUMPLER CAPTURED ON THE OISE FRONT.

The machine-gun armament of aeroplanes will doubtless interest those of our readers who heard the sound of serial machine-gun fire during the recent air-raids on London, when some of our gallant defenders fought duels with the enemy in the upper air. Two R.F.C. officers, it will be recalled, Captain Hackwill and Lieut. Banks, succeeded in this way in bringing down one of the raiders in Essex. During January, according to recently published statistics, 290 German and Austrian aeroplanes were brought down by the Allies, and 234 during December. The Germans claim to

have brought down 101 Allied machines during January. The Allied total of enemy machines brought down in January is made up as follows—144 by the British on the Western Front; 79 by the French on the Western Front; 64 by Allied airmen on the Italian front; 3 by the Belgians. Of the 144 enemy machines brought down by our airmen (R.F.C. and R.N.A.S.) on the Western Front, 86 were destroyed by pilots and 4 by anti-aircraft gun and rifle fire, 53 driven down out of control, and 1 captured intact in our lines. On the Italian front 39 enemy machines fell to British airmen.



THE WORLD OF FLIGHT.



AIR-CRAFT VERSUS WAR-SHIPS.

RECENT operations by aeroplanes of the Allies against the German war-ships *Goeben* and *Breslau* (called by some fancy Turkish names to hide their Hunnishness from the victimised Turk!) suggest that a short dissertation on the offensive use of aircraft against war-ships may be of interest. One says "the offensive use" specifically, to distinguish such operations from scouting operations and from spotting for artillery.

In sea-scouting from the air the air-ship, sometimes called the "dirigible," is of high value, having considerable capacity for remaining in the air, patrols of eight or ten hours' duration being comparatively common. With this capacity for duration the air-ship possesses sufficient speed to enable it to escape from any attack by sea-going craft; so that, when used with due recognition of its limitations, the air-ship is a very valuable weapon.

In spotting for naval guns the air-ship has also a certain value, provided always that there are no hostile aeroplanes of superior speed in the vicinity, for the best of air-ships is at the mercy of a second-rate aeroplane.

As an actual weapon of offence, however, against war-ships, the air-ship may be considered as being right out of court. The air-ship can only operate by dropping bombs, and if it comes low enough over a warship to make at all sure of its aim it is bound to come so low as to be easily within range of searchlights during a night attack.

It is necessary, perhaps, to explain here that the small British air-ships have done excellent work against German submarines; but it is only fair to state that their success has been due to exceptional circumstances. If one of the British or French submarines happens to see a German air-ship out at sea, it promptly emerges and turns its gun or guns on the air-ship. And in every case the German has fled. When, on the other hand, a German submarine sees a British air-ship, it promptly submerges and stays there. Quite frequently a bomb from a British air-ship has resulted in a German submarine diving and remaining below permanently.

The difference in conduct is largely explained by the fact that, whereas a British submarine coming to the surface will be among friends and so can turn its attention to the air-ship, a German submarine on emerging is just as likely as not to find itself the prearranged target of a number of destroyers. So that the command of the surface of the sea by the British Fleet is of definite value to the air-ships of the Allies.

Apart from this particular use of air-ships, large or small, against submarines, there is little chance of an air-ship attacking a war-ship with success. Aeroplanes, on the other hand, provided that they are of the right type, can be used with fair prospects of success against war-ships wherever found, and in almost any weather in which a fleet action could be fought. Aeroplanes used in attacking war-ships may be either ordinary shore-going machines, starting from aerodromes on land, or possibly launched from a ship's deck, or they may be seaplanes of the ordinary type—that is to say, ordinary aeroplanes fitted with floats to enable them to get off and alight on water; or they may be flying-boats, which are boat-like hulls, carried into the air by an aeroplane superstructure. They may attack either with bombs or with torpedoes.

It was announced by the British Admiralty in 1917 that in August 1915 a Short seaplane belonging to the R.N.A.S., piloted by Flight-Commander Edmonds, R.N., had sunk a Turkish transport in the Marmora. This announcement was made in consequence of the use of torpedo-carrying seaplanes by the Germans against British merchant-ships in the North Sea in 1917—be it said without much success.

As a matter of fact, experiments with torpedodropping seaplanes had been carried out on Southampton Water, in full view of foreign shipmen, for some time before and after the outbreak of war. Certain

By C. G. GREY,
Editor of "The Aeroplane."

work. Moreover, the big destroyer, operating on one plane and at a maximum speed of some 40 miles an hour, is very much easier to hit than is a small aeroplane, manoeuvring in three dimensions and travelling at anything between 80 and 120 miles an hour.

As the seaplane approaches its target, the pilot "flattens out" as if to alight, releases the torpedo, which continues on its way—while the seaplane, relieved of a load of a good many hundreds of pounds' weight, quickly rises to a height at which it is impossible for the ordinary naval gunner to hit it.

The advantages of this method of attack are fairly obvious. A seaplane and one man can do as much damage as a destroyer and its crew. Therefore, a big fleet of seaplanes could do immense damage among an enemy fleet of war-ships, especially if those war-ships were at anchor and so offered an easy broadside shot. At the same time, the risks to the attacking air fleet would be very small compared with the risks of attacking with destroyers or other surface craft.

The other serious method of attack by aircraft against warships is the dropping of bombs from aeroplanes or seaplanes or flying-boats. In this form of warfare the target, which is the deck of the ship, is more difficult to hit than in the other case. A torpedo carries its own mechanism, which keeps it a certain distance below the surface of the water, and so the pilot of the aircraft is only concerned with giving it the right direction when it is launched.

To put it another way, a torpedo can only miss a ship by going ahead or astern of it, whereas a bomb may miss it ahead or astern or on either side, so the possibilities of error are at least quadrupled. Furthermore, a torpedo, if it hits a ship at all, blows a hole in it below the water-line and is bound to do serious damage; whereas a bomb hitting the deck may blow away a part which will not interfere with navigation.

Nevertheless, when operating against a fixed mark, as in the case of the stranded *Goeben*, it may be possible, by a continued series of attacks, to blow away all deck-hamper—such as funnels, bridge, deck-houses, and so forth—and thus render the ship unnavigable. Big bombs of the modern kind should also abolish the smaller guns and shatter or jam the turrets of the bigger guns. Consequently, where sufficient torpedo-seaplanes are not available, and where there are plenty of ordinary craft to be had, it is well worth while to attack war-ships with bombs. One assumes that in the case of the *Goeben* only small bombs were available. A torpedo

would have finished the affair in one shot.

A third method of attack, which partakes rather of the nature of a sport than of serious war, is to use machine-guns from fast aeroplanes or seaplanes against the smaller ships of war, such as destroyers, torpedo-boats, and patrol-boats. The fast-flying machine is hard to hit, whereas the machine-gunner on board her can rake the sea-vessel from end to end as he flashes past. With luck he may kill some of the crew, and under favourable circumstances may knock out the helmsman and cause the boat to run ashore or collide with another. This result, however, is so problematical that such attacks can only be regarded as an interlude in the regular work of the day. The other two methods are serious war, and must ultimately become highly specialised branches of naval operations.



A SEAPLANE AS TORPEDO-BOAT OF THE AIR: (1) A SEAPLANE CARRYING A TORPEDO FOR USE AGAINST ENEMY SHIPPING; (2) A TORPEDO STRIKING THE WATER IMMEDIATELY AFTER ITS RELEASE. The torpedo is carried between the floats, and is dropped into the water just as it would be from an above-water torpedo-tube. The photographs are reproduced from that remarkably interesting book, "The Work and Training of the Royal Naval Air Service," which was published recently.

patents in connection with this weapon stand in the name of Commodore Murray F. Suter, C.B., R.N., who was Director of the Air Service at the Admiralty when war broke out. Experiments in the same direction have been made in the United States, where Rear-Admiral Bradley Fiske, U.S.N., has patented sundry torpedo-dropping devices in combination with seaplanes. So far, the Germans and the British are the only people to use torpedoes launched from aircraft in actual war.

The idea underlying the dropping of torpedoes from aeroplanes is that, instead of sending a destroyer with a crew of a hundred men or more within the range of the guns of big ships in order to launch a torpedo, it is much more economical to send a seaplane carrying one man—or at most two men—to do the same

WAR IN THE AIR: FEATS OF FRENCH NIEUPORT AEROPLANES.



THE END OF A FRANCO-GERMAN AIR-DUEL: A NIEUPORT MACHINE SENDS AN LVG. CRASHING TO EARTH IN FLAMES.



GERMAN "SAUSAGES" FALL VICTIMS TO FRENCH AEROPLANES: NIEUPORT MACHINES DESTROYING ENEMY KITE-BALLOONS.

WAR IN THE AIR: A BRITISH MACHINE "PICKS" A GERMAN "OFF THE TAIL" OF A COMRADE.

DRAWN FROM MATERIAL SUPPLIED BY AN EYE-WITNESS.



"I SHOT THE ALBATROSS": A BRITISH NIEUPORT SAVES AN OBSERVING MACHINE FROM ITS GERMAN ASSAILANT IN THE NICK OF TIME.

On the La Vacquerie front recently, one of our "Quirk" aeroplanes (seen on the left) was ranging for the Heavies, and carrying out a "destruction-shoot" on some enemy guns, when a German Albatross fighting machine attacked it. All seemed over when, like a flash of lightning, one of our small, patrolling scouts, a British Nieuport (seen on the right) literally fell through the clouds on to the German's tail. The Albatross nose-dived to earth, and the Nieuport dived with it, both firing as they went. As they neared the earth the German burst into flames and crashed; while the Nieuport flattened out and climbed again to its normal altitude.—(Drawing Copyrighted by the United States and Canadian)

WAR IN THE AIR: THE GIANT ITALIAN CAPRONI AEROPLANES.

PHOTOGRAPHS BY C.N.



TWO BIPLANES AND ONE TRIPANE IN THE AIR: THREE GIANT CAPRONIS OF DIFFERENT TYPES IN FLIGHT.



"DIGNITY AND IMPUDENCE"—A NEW VERSION: A GIGANTIC CAPRONI TRIPANE BESIDE A DIMINUTIVE MONOPLANE.

Much has been heard of the great Caproni aeroplanes, named after their Italian designer. They have done valuable service on the Italian front. "Regularly, day after day," wrote Mr. J. M. N. Jeffries not long ago, "huge Caproni biplanes sail out with tons of explosives and break the joints of the enemy's railways. . . . The size and power of

these Caproni machines is indeed so great that they can carry very weighty bombs of terrible efficiency. . . . Though one would think their great size would make them easy marks, the Capronis have provided the enemy with very few triumphs indeed. One with two engines out of action came home safely on its third and lateral engine."

WAR IN THE AIR: A DUEL; A GERMAN TOWN RAIDED.



A FRENCH OVERLAND MACHINE VICTORIOUS IN A DUEL WITH A GERMAN SEAPLANE: AN EXPLOIT OVER THE CHANNEL.



ONE OF THE ALLIED AIR-RAIDS ON KARLSRUHE: A GROUP OF FRENCH DOUBLE-ENGINED CAUDRON AEROPLANES BOMBING THE CITY BELOW.

A WINTER SUNSET ON THE HILLS NEAR VERDUN.



THE VERDUN FRONT IN ITS WINTER ASPECT: A PICTURESQUE PHOTOGRAPH

Snow generally imposes a lull upon military operations on any large scale, and the white landscape assumes a comparatively peaceful aspect. Yet signs of war are not absent at such times on the roads leading to the Front. Transport of various kinds—wagons, ambulances, and so on—still goes on its way, and the ceaseless work of preparation continues. On the

SIGNS OF WAR AMID A SNOW-CLAD LANDSCAPE.



OF SUNSET OVER THE SNOW TAKEN RECENTLY IN THE VALLEY OF BELRUP.

Verdun front, since the German flame-attack that was beaten off last month, no movements on a large scale have been reported, although the communiqués have mentioned from time to time artillery activity at various points in the region of the Meuse, and occasional infantry actions of a minor character.



KEEPING AT MURKINAS TRESPASSERS ON THEIR GROUND: STUDENTS OUT OF SCHOOL (16TH CENTURY).

SCIENCE & NATURAL HISTORY



UNIVERSITY LIFE IN THE SIXTEENTH CENTURY: A DOCTOR RECEIVING THE SIGNS OF HIS DEGREE.



LEARNING UNDER DIFFICULTIES IN A CLOISTER OF A CATHEDRAL: ST. DENY'S IN SCHOOL (16TH CENTURY).

SCIENCE JOTTINGS.

FOOD-HOARDING: ITS MEANING.

FOOD-HOARDING by individuals, at a time when the community at large is faced with a serious shortage of food—which may continue—becomes indeed a serious offence; and he who pleaded extenuating circumstances for such a breach of good citizenship would be likely to find that he had still further incensed his neighbours. One wonders how any among us can possibly offend in such a matter.

Yet a little consideration will show that such conduct, reprehensible though it be, is yet explainable. Briefly, it is the outcome of a primitive instinct to ensure survival through times of stress; this instinct we still consider a valuable asset, as is shown by our approval of such as make provision for a "rainy day" in the form of a balance at the bank.

But, as members of a civilised community, we are expected to be more than creatures of "instinctive impulses." We pride ourselves on our powers of "reasoning"—wherein, indeed, we differ from the "beasts that perish." A very little reasoning will suffice to show that these two forms of providing against times of adversity are not on the same plane. For, in saving up money against illness or old age, we are not only taking steps to ensure comfort, but also to relieve others of the charges for our maintenance. But in storing up food, when the supply is limited, we are stealthily robbing others of the means of life to secure survival for ourselves. The "food-hoarder," in short, shows a keen appreciation of the discomforts of hunger, and at the same time a callous indifference to the fate of his neighbours faced with the same dismal prospects as himself. He lacks the spirit of Sir Philip Sidney—he is not led to say with him, "His need is greater than mine." But it does not follow that all "food-hoarders" are moral degenerates. For the most part, they are to be regarded as people who have not cultivated the habit of thinking about the consequences of their actions. They are rather to be regarded as creatures of instinct who "act as the spirit moves them," and think afterwards, if the "spirit" should happen to have landed them in unexpected difficulties—as so often happens. Thinking

is a great bore to some people, and they rather pride themselves in proclaiming this, as though it conferred an enviable distinction!

The instinct to provide against times of food-shortage is displayed by many of the lower animals such as live in regions periodically subjected to suspension of vegetative growth, caused either by cold or heat. Thus the paca, or tail-less hare of Siberia, accumulates enormous quantities of grass, which is piled up in the neighbourhood of its burrow like

habits in this respect. The last-named passes the spells of real wintry weather in a state of profound torpor, awakening, as the temperature chances to rise, to partake of a meal. The squirrel, on the other hand, can hardly be said to hibernate, though it is popularly supposed to do so. But it is most persevering during the autumn days in storing up a supply of nuts of various kinds for use when the ground lies deep in snow, when the hunt for scattered nuts is made impossible. Its stores, however, are spread over a wide area, and commonly number so many separate hoards that many are forgotten.

Among birds there are but few species which have developed the habit of storing up food against times of scarcity. Some of the woodpeckers afford the best instances of the kind. The Californian woodpecker, for example, will band together in considerable numbers, and, selecting an oak-tree suitable to the purpose, will proceed to riddle the bark with holes. This done, they set to work to collect acorns, which are thrust into the holes and there they are left for some time—apparently till the nuts have become the nidus of insect larvae. At irregular intervals parties return to the tree to inspect the store, and when all is ready the whole of the original band return to the feast. The red-headed woodpecker of Indiana similarly collects great beech-nuts. But these are deposited in natural crevices and cavities in trees, clefts in gate-posts, and even the thatch of houses. But

they also store live grasshoppers after the method of the Californian woodpecker in regard to acorns, forcing the wretched insects into crevices of the bark, and, leaving them till a convenient season. In this they recall our "butcher-birds," or shrikes, which impale mice, small birds, and beetles on thorns, forming thus the "larder" sometimes seen in our hedgerows. The larder of the shrike, however, is but a temporary store, for this bird leaves us for the winter, which is passed in Africa.

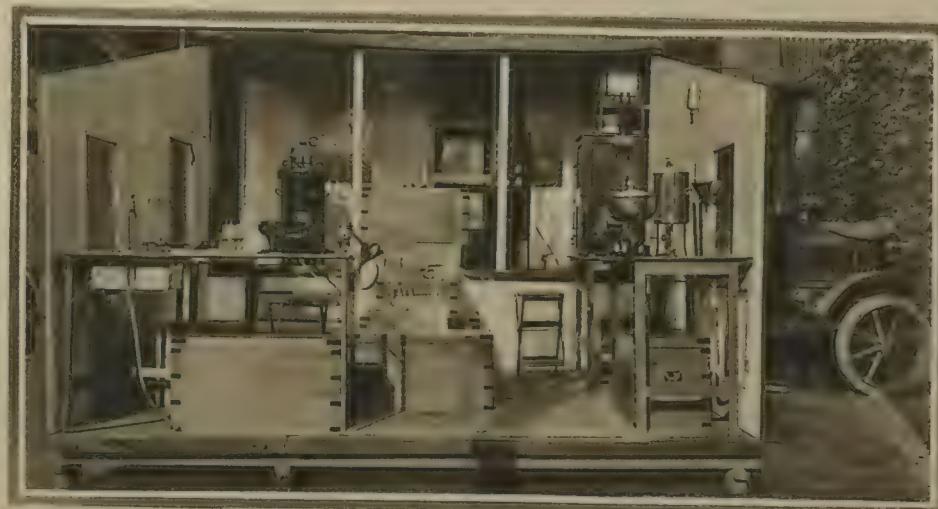


SCIENCE MILITANT: A MOTOR BACTERIOLOGICAL LABORATORY WITH ITS PORTABLE ANNEXE BUILT OUT FROM THE CAR.

The two photographs on this page illustrate a motor bacteriological laboratory recently presented to the War Office for the use of the British Army Medical Department by Mr. Henry S. Wellcome, founder of the Wellcome Bureau of Scientific Research. The body of the car and its extended weatherproof annex form a self-contained and fully equipped laboratory measuring 219 sq. ft. The annex and fittings can be readily assembled and packed on the 3-ton chassis.

miniature haystacks. As these animals live in large communities, the supplies thus laid up are considerable, and are plundered by the sable-hunters for their

stores of natural crevices and cavities in trees, clefts in gate-posts, and even the thatch of houses. But



WAR ON GERMS DURING WAR WITH GERMANY: THE INTERIOR OF THE ANNEXE OF A MOTOR BACTERIOLOGICAL LABORATORY.

horses. Our own wood-mouse stores up in its burrows beech-mast, nuts, corn, peas, and beans by the pint. The hamster of the Rhine, and in Siberia, makes most elaborate burrows for its winter quarters, containing both a sleeping-chamber and "granaries," which are well stocked with corn. The squirrel and the dormouse, with us, are well known for their provident

really comparable, when comparison is made with human conduct, rather to the saving for sickness or old age than to the action of those who strive to secure their own safety in times of stress at the expense of their neighbours who, from altruistic motives, refrain from taking more than their fair share of the common stock.

W. P. PYCRAFT.

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FOR KING AND COUNTRY: OFFICERS ON THE ROLL OF HONOUR.

PHOTOGRAPHS BY SWAINE, RUSSELL, C.N., WESTON, LAFAYETTE, GILL, AND HOWE.



SUB-LIEUT. D. P. CHRISTIE, R.N. Son of the late Mr. Norman Peter Christie, of Hoddesdon.

LIEUT-COL. P. E. BENT, V.C., D.S.O., Leicestershire Regt. Son of Mrs. Bent, of Salisbury.

LIEUT. E. M. BOWLY, R.N. Officially reported drowned while on active service.

LIEUT. S. W. ROWLESS, A.S.C. Attacked R.F.C. Officially reported died of wounds.

ENGR-LIEUT. D. CHAPMAN, R.N. Officially reported as killed while on duty.



2ND LT. L. G. COLBECK, M.C., R.F.A. Son of the late Mr. Charles Colbeck, of Harrow.

LIEUT-COL. ADRIAN C. GORDON, D.S.O., R.F.A. Son of Mr. and Mrs. Charles Gordon, late of Enfield.

MAJOR GUY L. OLLIVIER, R.G.A. Son of Mrs. Ollivier, of "Beaulieu," The Polygon, Southampton.

LIEUT. G. HOLMAN, R.F.C. Officially reported as having been killed in action.



FLT-OBSERV. W. B. JONES, R.N.A.S. Mentioned despatches. Son of late Bishop of St. David's.

BRIG.-GEN. G.S. SHEPHERD, D.S.O. M.C., R.F.C. Son of Sir Horatio and Lady Shephard.

LT. RUPERT FARQUHAR, M.C., Grenadier Guards. Son of Mr. Ernest Farquhar, Eaton Square.



CAPT. H. E. WALLER, York and Lancs Regt. Son of Col. E. Waller, I.A., Ealing.

LIEUT-COL. HUBERT PODMORE, D.S.O., Northants Regt. Son of Mr. and Mrs. George Podmore, Charney Hall, Grange-over-Sands.

MAJOR W. C. KENNEDY BIRCH, M.C., Yorkshire Regt. Only son of Colonel and Mrs. Birch, of Walton-on-Thames.

CAPT. G. C. RANSOME, Yorkshire Regt. Officially reported as having been killed.



SUB-LT. E. C. DE WET, D.S.C., R.N. Officially reported by the Admiralty as drowned.

LIEUT. E. J. WOODHOUSE, M.A., F.L.S., Indian Horse. Son of the late Mr. G. E. Woodhouse, of Blandford.

LIEUT. C. H. E. BOULTON, Cameron Highlanders. Son of Captain Harold Boulton, C.V.O.

LIEUT. W. L. CURWEN, M.C., R.G.A. Son of Mr. Robert Curwen, The Elms, Frome.

SUB-LIEUT. H. A. SHAW, R.N. Son of Mr. A. P. Shaw, D.L., J.P.

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Reserve Fund, £4,342,826 0 0

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HEAD OFFICE: 5, THREADNEEDLE STREET, LONDON, E.C. 2.

Joint General Managers: J. M. MADDERS, S. B. MURRAY, F. HYDE, E. W. WOOLLEY.

Dr. LIABILITIES AND ASSETS. 31st December, 1917. Cr.

Dr.	Liabilities and Assets. 31st December, 1917.	Cr.
To Capital Paid up, viz.:—		
22 10s. 0d. per Share on 2,075,530 Shares of £12 each	5,188,840 0 0	
.. Reserve Fund	4,342,826 0 0	
.. Dividend payable on 1st February, 1918	350,246 14 0	
.. Balance of Profit and Loss Account, as below	733,785 5 8	
	10,615,697 19 8	
.. Current, Deposit and other Accounts	220,554,768 9 5	
Acceptances on account of Customers	8,826,865 17 6	
	229,994,332 6 7	
By Cash in hand (including Gold Coin £7,000,000) and Cash at Bank of England	44,110,353 13 10	
.. Money at Call and at Short Notice	31,003,500 9 2	
.. Investments:—		
War Loans, at cost (of which £108,418 10s. is lodged for Public and other Accounts) and other British Government Securities	33,110,534 13 6	
Stocks Guaranteed by the British Government, India Stocks and Indian Railway Debentures	181,780 10 0	
British Railway Debenture and Preference Stocks, British Corporation Stocks, Colonial and Foreign Government Stocks and Bonds	1,774,673 4 2	
sundry Investments	660,352 18 0	
Bills of Exchange	521,463 5 10	
	35,052,991 17 10	
.. Advances on Current and other Accounts	68,510,558 1 9	
.. Advances on War Loans	12,645,339 9 0	
.. Liabilities of Customers for Acceptances	8,820,865 17 6	
.. Bank Premises, at Head Office and Branches	2,837,210 6 0	
.. Belfast Bank Shares:—		
49,684 212 10 0 Old Shares		
22 10 0 paid		
148,204 212 10 0 New Shares 22 10 0 paid		
Cost	21,225,905 0 0	
Less part Premium on Shares issued	2472,269 0 0	
	752,639 0 0	
	229,994,332 6 7	

Dr. PROFIT & LOSS ACCOUNT for the year ending 31st December, 1917. Cr.

Dr.	Profit & Loss Account for the year ending 31st December, 1917. Cr.
To Interim Dividend at 18 per cent. per annum to June 20, 1917, less Income Tax	322,703 9 11
.. Dividend payable on 1st February, 1918, at 18 per cent. per annum, less Income Tax	350,246 14 0
.. Reserve Fund for Contingencies	500,000 0 0
.. Salaries and Bonus to Staff serving with H.M. Forces and Bonus to other Members of the Staff	304,518 19 3
.. Balance carried forward to next account	733,785 5 8
	22,211,254 8 10

EDWARD H. HOLDEN, Chairman and Managing Director.
W. G. BRADSHAW, Deputy-Chairman.DAVID DAVIES, Directors,
CARNOCK,
SHAREHOLDERS OF THE LONDON CITY

AND MIDLAND BANK LIMITED.

In accordance with the provisions of Sub-section 2 of Section 113 of the Companies (Consolidation) Act, 1908, we report as follows:—
We have examined the above Balance Sheet in detail with the Books at Head Office and with the certified Returns from the Branches. We have satisfied ourselves as to the correctness of the Cash Balances and the Bills of Exchange and have verified the correctness of the Money at Call and Short Notice. We have also verified the Securities representing the Investments of the Bank, and having obtained all the information and explanations we desire, we are of opinion that such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Company's affairs according to the best of our information and the explanations given to us and as shown by the books of the Company.

WHINNEY, SMITH & WHINNEY, Chartered Accountants.

London, 24th January, 1918.

THIS BANK IS THE PROPRIETOR OF THE BELFAST BANKING COMPANY, LIMITED.



66

Premier⁹⁹

The Whisky de Luxe

Owing to Government Restrictions the proprietors of 'Premier' cannot meet all demands. But they can guarantee that 'Premier' absolutely retains those characteristics which have made its old time reputation — chaste quality: wonderful delicacy + great age.

WRIGHT & GREIG, Ltd.,
Distillers,
Glasgow and London.

TRY IT IN YOUR BATH

BY APPOINTMENT



TO H.M. THE KING

SCRUBB'S CLOUDY AMMONIA

INVALUABLE FOR TOILET AND
• • DOMESTIC PURPOSES • •

Price 1s. per Bottle. Of all Grocers, Chemists, Etc.

The public are cautioned against the many injurious imitations of "Scrubbs' Ammonia" that are being offered, and attention is drawn to the signature of Scrubb & Co. on each bottle, without which none is genuine.

SCRUBB & CO., LTD., GUILDFORD STREET, LONDON, S.E.

NEW NOVELS.

"Our Little Kingdom," to come across when it is as sincere and kindly as Mr. Paul Creswick's "Our Little Kingdom" (Duckworth). The simple annals of a Lambeth family have their appointed place among all the other family annals that go to make up the history of England: and, though it is left to the reader's intelligence to discover without the help of headlines, its significance is not allowed to dwindle as the chapters develop and unfold. The people are the South London middle-class living in a world bounded, for residential purposes, by the river and (say) the Sydenham hills. Sir Walter Besant once described South London as a city of two million people without a cathedral, a picture gallery, a public library, or a park; and though that indictment no longer holds true, it is still, of the great towns of the world, probably one of the most poorly furnished with public buildings and endowed institutions. All the more credit, therefore, to Mr. Creswick's young people, who did find some sort of culture for themselves, and who were shaped, more by the Englishman's sense of self-respect than by any guidance of the city or the State, into decent and useful citizens. The tone of "Our Little Kingdom" is entirely wholesome, and, believing it to be true to life, we can recommend the book to those who may wish to, through the eyes of one who loves them, the South Londoners' battle with the changes and chances of life.

"Young Madam at Clapp's" (Hutchinson) is on the side of the angels, first, last, and all the time. It is ingenious, and both its East Enders and its Society ladies are characters wholly without subtlety, but—well, the fact is, that, for all its faults, we can applaud the spirit of "Young Madam at Clapp's." Mrs. Baillie Saunders is so intensely in earnest that she contrives to impart life and vigour to figures grotesquely overloaded with the peculiarities of their type. It is difficult to read of Father Ingold without conjuring up the mental vision of a prig, or to see Marion apart from a really atrocious mouthing of words and phrases; but it would be much more difficult to lay aside, unread, Mrs. Baillie Saunders' vivid account of their clash, their harmony, and their union. The plot hangs upon the will

of old man Clapp of Shadwell, who made money in those parts, and left it, conditionally, to the descendant who should live in his house by the Commercial Road, and marry a "denizen of Shadwell, Merton, of high degree (though she knew it not), came to the East of London, an agnostic and a spinster, and left it a devout Churchwoman and the Rector's bride. How it all happened, we advise people in search of a good story to discover for themselves.



ON THE WESTERN FRONT: REPAIRING SHELLS AT A "DUMP."
Official Photograph.

"My Two Kings." Mrs. Evan Nepean's admiration of her Stuart kin finds ample expression in "My Two Kings" (Melrose). Mrs. Nepean postulates her former existence, in the person of Charlotte Stuart,



ON THE WESTERN FRONT: TROOPS ON THEIR WAY TO THE BATTLE-AREA BY BARGE.
Official Photograph.

a cousin of the King, at Charles the Second's Court. She is a whole-hearted loyalist, and makes no bones about condoning the weaknesses and glorifying the personalities of Charles and the young Duke of Monmouth. She does not include James II. among the objects of her devotion, and her attitude towards him is reciprocated by his dislike of her. The light of Charlotte Stuart's days went out when Monmouth died. It need scarcely be said that it is not the Court of Grammont that comes through to us, nor the London of an unexpurgated Pepys. Charlotte Stuart was a gentle lady, modest and refined, and she sets down nothing of the traditional sensualist we know as Charles II., a character which would probably have repelled an essentially virtuous woman. Nor, for that matter, does she show us Charles as the patron of science. Her Whitehall is a world of gallant gentlemen in fine feathers, who dance and merry-make, and chat more or less harmlessly with the ladies. Mrs. Nepean's recollections of her other incarnation are vague about her husband and son, who do not figure in the history or the memoirs she has studied in the present life, and remarkably distinct about the beautiful Monmouth and the melancholy Charles. Her woman's memory can evidently carry forward the smallest details of a dress across two hundred years of oblivion. "My Two Kings" is a pleasant apology for Charles and his first-born, and a rather striking example, in quite the Chinese manner, of ancestor-worship.

In these trying times, when the majority are finding that they have nerves, the question of the beverage to be drunk daily should be carefully considered. But these are also busy times, and it is satisfactory to know that the question of table waters is capable of safe and agreeable solution by the use of "Malvern," a British table-water of indisputable merit, and a record of nearly three centuries. The name of the house supplying it, W. and J. Burrow, Ltd., The Springs, Malvern, is in itself a guarantee of excellence. Pure and sparkling, it is bottled from the historic St. Ann's Spring, Malvern. The water is of remarkable purity. The keynotes of its quality are purity and softness, and it can be obtained at stores and of chemists, etc., everywhere, but, in the event of any difficulty, Messrs. W. and J. Burrow, Ltd., should be written to. "Sparkling Malvern" is especially good for sufferers from gout and rheumatism, and "Malvern" is an ideal table-water. Moreover, it is inexpensive.

Think!

Benger's Food nourishes in conditions when other foods cannot be absorbed.

Think what this means in the crisis of illness, when not only the kind of food given, but the amount of it, must be medically judged with the greatest care.

Benger's Food is distinct from all others in that it contains natural digestive agents. While you prepare it, these so act upon both the Food and the fresh milk used, that, when Benger's is ready to serve, the earlier stages of digestion have been accomplished.

BENGER'S
Food

assists nature.—Infants
thrive on it. Delicate &
Aged persons enjoy it.

Benger's Food is entirely British, in Origin, Ownership and
Manufacture. It is sold in tins by Chemists, etc., everywhere.
An informative booklet—“Benger's Food and How to
Use It” for Infants and Infants in the First Post-Infantation—
can be had free from the Office, 10, MANCHESTER,
SIXTY-NINE, S.W. 117, Pitt St., and depots throughout Canada.

B214

"BEAUTIFULLY COOL AND SWEET SMOKING"
Player's Navy Cut Tobacco

Packed in varying degrees of strength to suit every class of smoker

Player's Gold Leaf Navy Cut	-	-	-	Per oz.
Player's Medium Navy Cut	-	-	-	8½
Player's Tawny Navy Cut	-	-	-	8½

PLAYER'S "WHITE LABEL" NAVY CUT - 7½

Also **PLAYER'S NAVY CUT DE LUXE** (a development of Player's Navy Cut) packed in Airtight Tins

2-oz. TINS

1/9



4-oz. TINS

3/6

Player's Navy Cut Cigarettes

HAVE A WORLD-WIDE REPUTATION

They are made from fine quality Virginia Tobacco and sold in Two Strengths—

MILD AND MEDIUM

MILD (Gold Leaf)

100 for 4/6	50 for 2/3	100 for 3/5	50 for 1/9½
24 for 1/1	12 for 6½d.	20 for 8½d.	10 for 4½d.

IN PACKETS AND TINS FROM ALL TOBACCONISTS AND STORES

These Cigarettes (and Tobaccos) are also supplied at DUTY FREE RATES for the purpose of gratuitous distribution to wounded Soldiers and Sailors in Hospitals.

Terms and particulars
on application to—
PTO

JOHN PLAYER & SONS, Nottingham

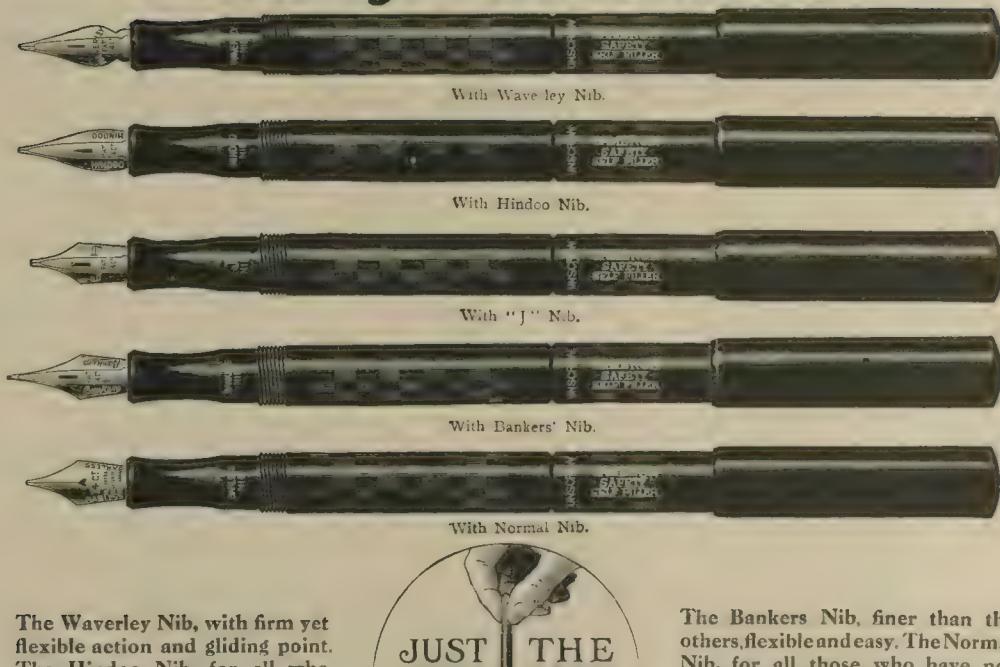
Branch of the Imperial Tobacco Co. (of Great Britain and Ireland) Ltd.

Cameron



Safety Self Fillers

This Range of Nibs reaches the requirements of the most exacting of writers.



No need of a separate filler. The Cameron is complete and self-contained.

The Waverley Nib, with firm yet flexible action and gliding point. The Hindoo Nib, for all who incline on the side of the nib in writing. The "J" Nib, broad-pointed, yet writing a clean stroke.



The Bankers Nib, finer than the others, flexible and easy. The Normal Nib, for all those who have not formed an attachment to the others. Price with Waverley, Hindoo, "J" Bankers or Normal Nib, 15/-.

Illustrated Catalogue from Stationers or MACNIVEN & CAMERON, LTD., WAVERLEY PEN WORKS, Birmingham.

LONDON: 30, Shoe Lane, London, E.C. 4.

EDINBURGH: 23, Blair Street.

GLASGOW: 17, West Regent Street.

PARIS: Kirby Beard & Co., Ltd., 5, Rue du Faubourg.



See the Dri-ped Diamond Trade Mark in purple on each sole; without it the leather's a substitute.

Think yourself a lucky man—

when you succeed in getting Dri-ped. Congratulate yourself—don't complain about the time spent in trying half-a-dozen repairers. But be sure to see the Purple Diamond Trade mark.

Dri-ped's Double Wear and Wet-resistance

make it worth while trying; with a little persistence you'll discover some of the small supply available for "Civi" wear.

Soldiers can Officers and men can usually obtain Dri-ped easily. Many repairers get Dri-ped have Government permits enabling them to get stocks for naval and military work.

"DRI-PED" Advertising Department, County Buildings, Cannon St., Manchester.

Sole Manufacturers—

WM. WALKER & SONS, LTD., Bolton, Lancs.

Get this booklet free. Write now on a postcard for interesting free booklet "About the Diamond Sign of Double Wear."

DRI-PED
Reg'd
THE SUPER-LEATHER FOR SOLES.

B/7 Φ

That cheerful spirit!



which goes hand in hand with

BEECHAM'S PILLS

LADIES' PAGE.

FINE, heartening, but absolutely lying tales are cheering the spiteful enemy about the terror inspired in Londoners by air-raids. The hideous German natures believing themselves safe from reprisals by reason of our incapacity, moral or physical, for such retaliation, chortle in their glee, less at the idea of the babes murdered in their cradles, the quiet civilians and the gentle women maimed or killed than at the silly notion of our universal fright. Not so much at the thought of a hundred or two killed and wounded do they rejoice as at the sweet vision they evoke of all London rushing into dank cellars, and all our ordinary life abruptly stopped by our millionfold fears. Far, far otherwise, O Hun! the truth. The crowd that does rush for shelter is in a microscopic proportion composed of the still absurdly large alien population in our Metropolis English mothers very properly seek shelter and safety for their children; but the average, the common or garden Englishman and Englishwoman, displays a cool, calm courage that is really remarkable. Very keen regret in many hearts the while, but panic terror—a complete stop in life's business to hurry to shelter—not a bit of it. You flatter yourselves, O Hun! in this fond notion.

Here is a quotation from a private letter, written with no thought of publication, and therefore giving a faithful, unvarnished picture of London during an air-raid. The writer is Miss Irene Miller, known both as a novelist and journalist. She says:

I couldn't send you a card last night to say we were all right, for long before the 'All Clear' signal was given we were all in bed and sound asleep. The 'All Clear' bugles just aroused me slightly, but only for half-a-second. I was dining at the Club when it commenced. The guns sounded very close, but nobody took any notice nobody does now! The diners went on dining, the waitresses went on waiting, and when it came to the peccifying, the speakers went on speaking—though I do think it must have been a bit of an ordeal to make a speech with that hubbub outside. It was a very nice little meal. First soup, and then an *entrée*, something '*à la belle Otero*' which was baked potato with the top cut off, the contents mashed and mixed with cut-up oysters, and put back again and re-baked for a few minutes. Then turkey, plenty of it, with potatoes and sprouts; then what they called Italian pudding, made of a thin sort of macaroni with preserved cherries, very nice; and dessert. On the back of the toast-list was reproduced the cartoon from this week's *Punch* (Jan. 23)—one of Bernard Partridge's beautiful figures, attired as a *knight-ess*, on the top of a height, holding a banner marked 'Woman's Franchise,' and entitled, 'At last!' It was said he was there; but I didn't see him. . . . It was a bit of a job to get home afterwards, for the raid was not officially over, though



A DISTINCTIVE OUTDOOR COSTUME.

This is made of black satin. The collar and basques, which are longer at the back than in front, are of black-and-white check. The stockings follow out the scheme of the dress.

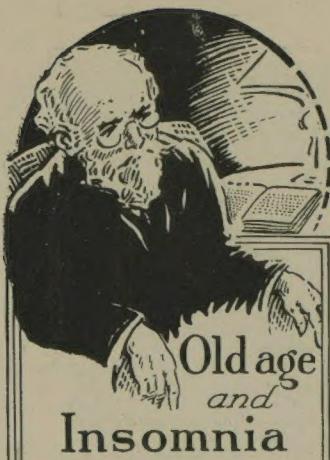
we had heard nothing of it for about an hour (it was twenty to twelve now). So I went in the Tube. There were a lot of people taking shelter there, sitting about on the steps and platforms, but hundreds more were just going home in the ordinary way. The trains came along packed full, and they seemed running quite frequently. Lots of those taking shelter weren't really terrified, I know, for they were loving couples, making it a sort of Hampstead Heath on Bank Holiday. Each soldier and his girl spread a newspaper on the platform, sat down, and leaned against the wall, with their arms around each other's necks and their heads on each other's shoulders (so to speak). There were little groups of such, on the giggle, and enjoying themselves immensely; and, of course, Mother couldn't scold if one stayed out with one's best boy, and explained that it was all the Air Raid, could she? The firing recommenced very noisily after a while; and there were quite a lot of people out, but nobody took any notice, and when I got home the family were all comfortably in bed."

A great response is being made to the Duchess of Marlborough's appeal for jewels for a Fund to maintain Infant Welfare Centres. Large numbers of ladies are sparing some of their ornaments to be sold to help the babies of poor mothers to live. One of the most tragic features of our ordinary social life is the large infant mortality. It has been quite the custom to ascribe all these deaths to "the ignorance and incapacity of the mothers," but this is most unjust. Children born with tainted constitutions cannot live, and infantile diseases, such as measles and whooping-cough, which find their way to the most sheltered and tenderly cared-for infants, cause a considerable part of the deaths. Above all causes, however, is sheer poverty; lack of wholesome surroundings, and of the food, always rather costly, that is alone suitable for young children.

Ignorance, in truth, exists amongst mothers, but if the Infant Life Centres did no more than try to instruct the poorest mothers about what they *ought* to do, the results would probably not be great. But the Duchess of Marlborough and her coadjutors do more than talk. They actually provide the milk (mostly now in a dried form) that the babies need, and also other kinds of helping food stuffs, either free of charge or much under shop prices. They maintain creches, and have free and sympathetic periodical inspections of babies, with skilled advice and any necessary material help ready for them directly they are found to be at all unwell. In short, the Centres are doing most valuable work, and any ladies who can spare a piece or two of jewellery cannot do better than donate it for this most womanly purpose. The Duchess has arranged for a show of the jewels already given at Selfridge's during the week beginning Feb. 10, when her Grace, with Lady Henry, the Hon. Sec., and other members of the Committee, will be in attendance to receive personally further gifts of jewels or money.

FILOMENA.





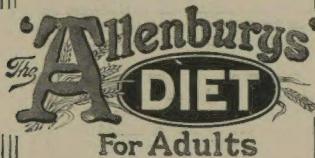
Old age and Insomnia

Old age and a nervous temperament favour sleeplessness. Before retiring take a cup of the 'Allenbrys' DIET. This complete and easily digested food soothes the nerves, promotes calm sleep and ensures digestive rest. Largely used by the Medical Profession.

Promotes Sleep.

"I have used the 'Allenbrys' DIET at night on going to bed with considerable benefit. I find it sustaining and comforting and sleep much better after taking it." (SIGNED), M.D.

AIDS DIGESTION. INDUCES SLEEP.



No Cooking or Cow's Milk required. Made with boiling water only.

In Tins at 2/- and 4/- each of Chemists. Allen & Hanbrys Ltd., London, E.C.

Myers' Silver Series

A NIB TO SUIT YOUR HAND

MMYERS & SON LTD.
SILVER SERIES

ALL ADMIRE
MYERS' PENS

SMOOTH AND VELVETY, WITH EASY GLIDING ACTION. THE PENS FOR RESTFUL WRITING.

Assorted 6d. Sample Box

OF ALL STATIONERS

Or post free, Sevenpence, from Manufacturers
M. MYERS & SON, Ltd., Charlotte Street,
Birmingham.

BE HAPPY AND WELL

Positively prevents and cures

SEA - SICKNESS and

TRAIN - SICKNESS.

Officially adopted by Steamship Companies on both fresh and salt water—endorsed by highest authorities—and used by travellers the world over. Contains no cocaine, morphine,

GUARANTEED TO PREVENT & CURE OR MONEY RETURNED.

HUTS IN THE HOLY LAND

and every other theatre of war, nearly 800 centres in all, including about 220 under shell-fire on West Front.

THE CHURCH ARMY

earnestly asks YOUR AID towards giving

CHEER AND COMFORT FOR THE MEN WHO ARE GIVING THEIR ALL FOR US.

HUTS COST £500, TENTS £300, fully equipped.

Cheques crossed "Barclays", a/c Church Army, payable to Prebendary Cartile, Hon. Chief Secy., Headquarters, Bryanston Street, Marble Arch, London, W.1

THE MEXICAN HAIR RENEWER.

Do not let Grey Hairs appear.

Restores Grey or White Hair to its original colour when the glands are not destroyed. Prevents Dandruff, and the Hair from coming out. Restores and Strengthens the Hair.

IS NOT A DYE.
Sold Everywhere.

Oakey's WELLINGTON Knife Polish

The Original Preparation for Cleaning and Polishing Cutlery, and all Steel, Brass, and Copper Articles. Sold in Canisters at 2/- 6d. & 1s., by Grocers, Druggists, Oilmen, &c.

Wellington Emery and Black Lead Mills, London, S.E. 1

Your teeth can be made whiter and more beautiful—decay can be prevented—tartar can be removed—simply by the daily use of

ROWLAND'S ODONTO "For Your Teeth."

The daily use of this dentifrice will remove and prevent the accumulation of Tartar, which is the most destructive Enemy of the Teeth, will purify and sweeten the breath, harden the gums, and make the Teeth healthily sound and white, 2/- per box. Sold by Stores, Chemists, and Rowlands, 67, Hatton Garden, London.

MAZDA



To obtain the utmost possible light at the lowest possible cost, see that you use only Mazda Drawn Wire ELECTRIC LAMPS



WHILE TRAVELLING.

opium, chloral, coal tar products, or their derivatives.

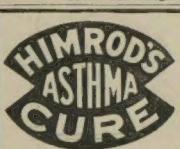
Testified by Royalty, the Nobility, Doctors, Chemists, Army and Navy. No bad after-effects. — Of all Chemists (in Boxes 2/6 & 5/-), or 19, St. Bride Street, London.

Culleton's Heraldic Office

92, PICCADILLY, LONDON.

Arms and Pedigrees of English and Foreign Families.

Genealogical Researches in Public Records. PEDIGREES ENGRAVED AND EMBLAZONED. Seals, Rings, Dies, Book-plates (ex-libris) Engraved. ARMORIAL STAINED GLASS. MEMORIAL TABLETS. Sketches and Designs for all purposes.



If you suffer from Asthma, Catarrh, Ordinary Colds, you will find nothing to equal

HIMROD'S CURE FOR ASTHMA

At all chemists 4/3 a tin.

SERIOUS SHORTAGE of MOTOR DRIVERS

for work of

Urgent National Importance.

500 LADIES WANTED, 17 to 45

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(Opposite Prince of Wales Theatre)

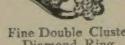
Watchmakers. Established 1851.

SMITH'S ALLIES WATCH LUMINOUS



Fine Sapphire and Diamond Ring. £4 15 0

A fine Assortment of Rings & Jewellery always in stock.



Fine Double Cluster Diamond Ring. £10 10 0

MEDICAL WRIST WATCH.

Luminous Figures and Hands.

Screw in Dust and Damp-proof Case.



WATCH

Sterling Silver 'ALARM' Watch white dial, £5 5 0

With Oscillating or Nickel cases, white dial, £5 5 0

With Rock dial 5/- each extra

Luminous Alarm Watch. Perfect timekeeper.

The back of the watch is arranged for standing on a table in slanting position. Every Watch Guaranteed.

S. SMITH & SON, LTD.,
REGISTERED TRADE MARKS
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"Preserves and Polishes." Linoleum, Oilcloth, Parquetry, Stained Floors, etc.



Bell's THREE NUNS Tobacco

A pipe of "Three Nuns" elevates the spirits like good wine . . . indeed, there is a flavour of old Madeira about it.

Testing Sample will be forwarded on application to Stephen Mitchell and Son, Branch of the Imperial Tobacco Co. (of Great Britain & Ireland), Ltd., Glasgow.

"King's Head" is stronger.

Both are sold at 9d. per oz.

"THREE NUNS" CIGARETTES

Medium, 4d. for 10

9d. for 20

Cardboard Boxes of 50, 1/9

575

THE CHRONICLE OF THE CAR.

An Excellent Scheme. Several of the largest firms in the motor trade, notably Daimler and Talbot, have had in operation for some years past systems either of works scholarships or some modification of the same scheme of things for the teaching and encouragement of scientific engineering and production. Most of these systems have depended initially on entrance examinations, in order that the fittest among the youthful aspirants might be selected from the mass; while some have been worked on the premium basis. So far as I know, no attempt has until now been seriously made to take in hand the technical education and general physical and moral welfare of the boy employees of the motor trade. Of course, it has only been since the war that boy-labour has assumed proportions which have made it necessary for any large scheme to be initiated; but now, in view of the very large number of youths who are employed in the great motor and engineering factories, it has become

scheme under which the lads in their employ are divided into two classes—skilled and unskilled. Those in the first section are to receive a special training in one of the skilled trades, subject to the parents agreeing to keep the boys in the firm's employment until twenty-one years of age. Classes will be held in the works during factory hours, and instruction given in general subjects—such as elementary mathematics, drawing, and so on. After the boy is seventeen, more technical subjects will be taught, suitable to the vocation the youth intends to follow; and a careful record of his history and progress will be kept, so that his standard of ability and attainments will be ascertainable in a moment. Naturally, it is not possible to deal with the unskilled section on precisely similar lines; but the B.S.A. Company takes the correct view that a great deal can be done by giving these lads something more to live for than their mere work. With this in view a large gymnasium has been equipped, under the supervision of a qualified instructor, in which the boys are taught Swedish drill and gymnastics. These are not war measures, but are intended to be permanent adjuncts of the B.S.A. works—and excellent adjuncts at that. Indeed, there is a good deal to be said for making similar welfare schemes compulsory in all great factories. Not only would they result in giving us happier, healthier boys, but they would undoubtedly tend to ensure that those boys who have ambition and a desire to make good in the business would have some sort of certainty that their efforts to rise would receive recognition. Improved factory conditions have done more than any fixed rules to encourage employees to maintain workshops in a healthful condition; and there can be little doubt that, by training the boys who will be the workmen of to-morrow in better habits, a still further great improvement will result. It is more than probable that other great manufacturing concerns will follow the lead thus given; but, as I have already said, there is more than a little reason in the argument that the adoption of a similar welfare scheme should be made compulsory in all factories where more than a certain minimum number of "young persons" are employed. Nor does there

seem to be any less necessity for establishing on a permanent basis welfare schemes for girl workers. The war has brought about a very large increase in the number of girl workers, and there seems no reason to



A PRESENTATION PORTRAIT: SIR FRANK BOWDEN.

It is more than usually gratifying in these strenuous times to find Capital and Labour on such good terms as they are in the Raleigh Cycle Company, of Nottingham, where the two thousand employees have just marked the seventieth birthday of Sir Frank Bowden, and the thirtieth year of the Company, by the presentation of his portrait. Sir Frank himself signalled the occasion by a gift of £2000 to the local hospital, and £1000 to the Salvation Army. In accepting the presentation, Sir Frank Bowden made a kindly and sympathetic speech, in which he remarked that nothing could be so gratifying to an employer as to find such appreciation from those who had worked with him.

doubt that a great proportion of that increase will be a permanency. If that should be so, then something of the sort will have to be undertaken. I know that "welfare superintendents" are attached to all munition works in which women are at all largely employed; but that is at present a temporary arrangement which should be, and must be, put on a permanent basis if the present conditions—modified, of course, by the return of a large number of men to their normal occupations—are to continue after the war.

Books for Prisoners of War. An appeal is made for technical books for British prisoners of war in Germany, in order that by a course of study they may be better fitted on their return to enter

(Continued overleaf.)

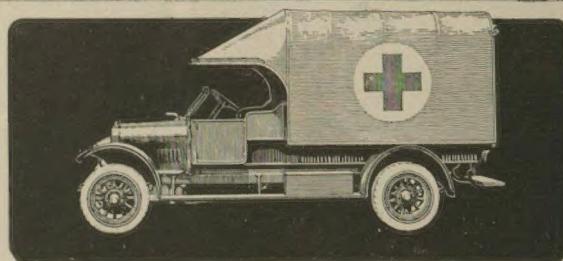


A BIT OF LEAFY WARWICK: A FAVOURITE CAR.

One of the popular 16-20-h.p. Wolseley touring-cars is shown in our photograph, passing through a pretty road at Castle Bromwich.

clear that if we are to educate and improve these lads into really useful artisans and citizens their welfare, apart from their actual working conditions, ought to be taken in hand. The Birmingham Small Arms Company has inaugurated a

seem to be any less necessity for establishing on a permanent basis welfare schemes for girl workers. The war has brought about a very large increase in the number of girl workers, and there seems no reason to



Severity of Service

Short but severe journeys are those which the Red Cross Ambulances have to perform out on the battle fronts. They have to plough their way over the very remnants of roads—shell-thrashed beyond recognition, and in the winter reduced to swathing mud streams by incessant rains.

Such is the test which

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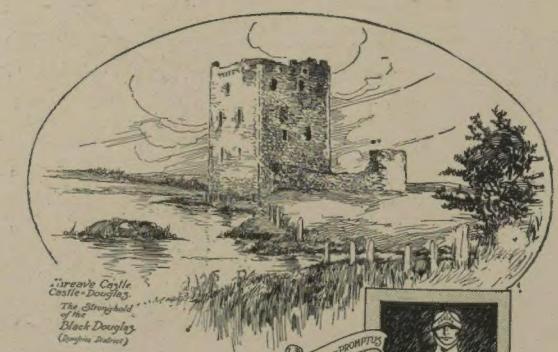
ambulances have had to face and endure for three years. Suffice it to say that many of the original Sunbeam Ambulances are still in service.

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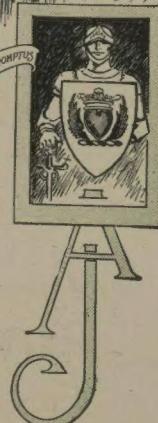
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Illustrated London News.

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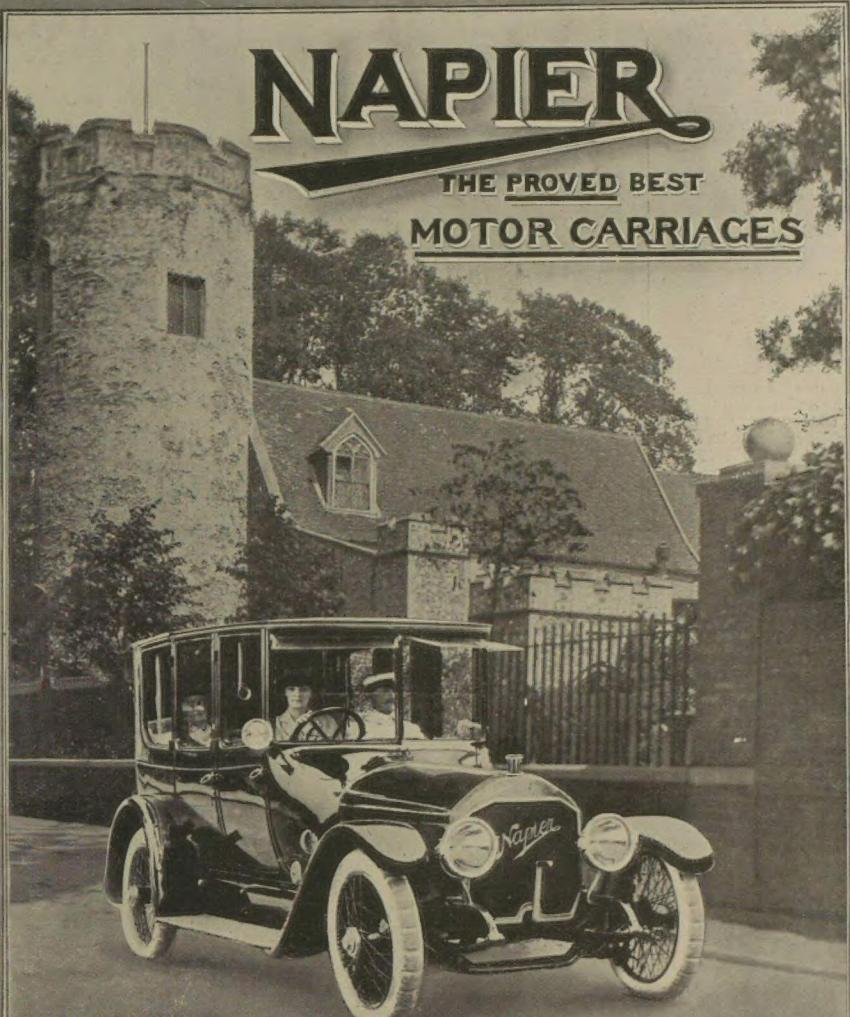
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The Triplex Balance-Sheet. The balance-sheet of the Triplex Safety Glass Company, which is just to hand, discloses a net profit on the year's trading of £20,133 7s. rd., out of which the directors recommend the payment of a second dividend of 6 per cent., making 10 per cent. for the year, leaving a balance of £12,502 to be carried forward, against excess profits and other contingencies.

A New Height Record. A world's height record of 23,048 feet, with passenger aboard, attained in 1 hour 3 minutes, has been established by Flight-Lieut. Francesco Brak-Papa, of the Italian Army, on a Sia-Fiat biplane. The flight was made from the Turin aerodrome on Dec. 14 last, the machine carrying a useful load of 792 pounds, and being officially controlled. The rate of climbing was as follows: 3280 feet were reached in 2 minutes 30 seconds; 6561 feet in 5 minutes; 9822 feet in 9 minutes; 13,123 feet in 15 minutes; 16,400 feet in 24 minutes; 19,685 feet in 37 minutes 30 seconds; 21,325 feet in 45 minutes; and the maximum height of 23,048 feet in just over the hour. This record performance was made with a 300-h.p. six-cylinder Fiat water-cooled engine, of the same type as the one used for the flight from Turin to London. The previous height record with a passenger was 21,161 feet, and was also held by Flight-Lieut. Brak-Papa.—W. W.



ON THE WESTERN FRONT: TOMMIES EXAMINING A GERMAN GUN—IN THE BACKGROUND, THE TANK WHICH PUT IT OUT OF ACTION.—[Official Photograph]

talk of a genial friend, can be highly entertaining. Of such a kind is a little book called "With Silent Friends," by Richard King (Jordan Gaskell), which consists of extracts from articles reprinted from a weekly contemporary. They possess to some extent the characteristics of ephemeral work, as the author modestly points out in the preface, but for all that they were well worth preserving in book form. They range discursively over a wide diversity of subjects in an easy and agreeable style, marked by shrewd common sense and the indispensable quality of humour. The preface is dated from St. Dunstan's Hostel for Blinded Soldiers and Sailors, and the author's profits on the first 5000 copies of the book are to be devoted to Sir Arthur Pearson's fund for the children of soldiers and sailors

tions recall the verse of a modern poet—"The small attritions wear us down."

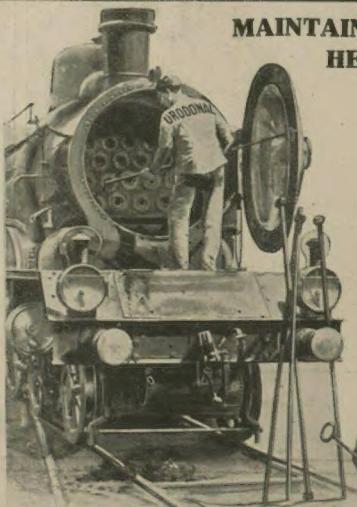
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